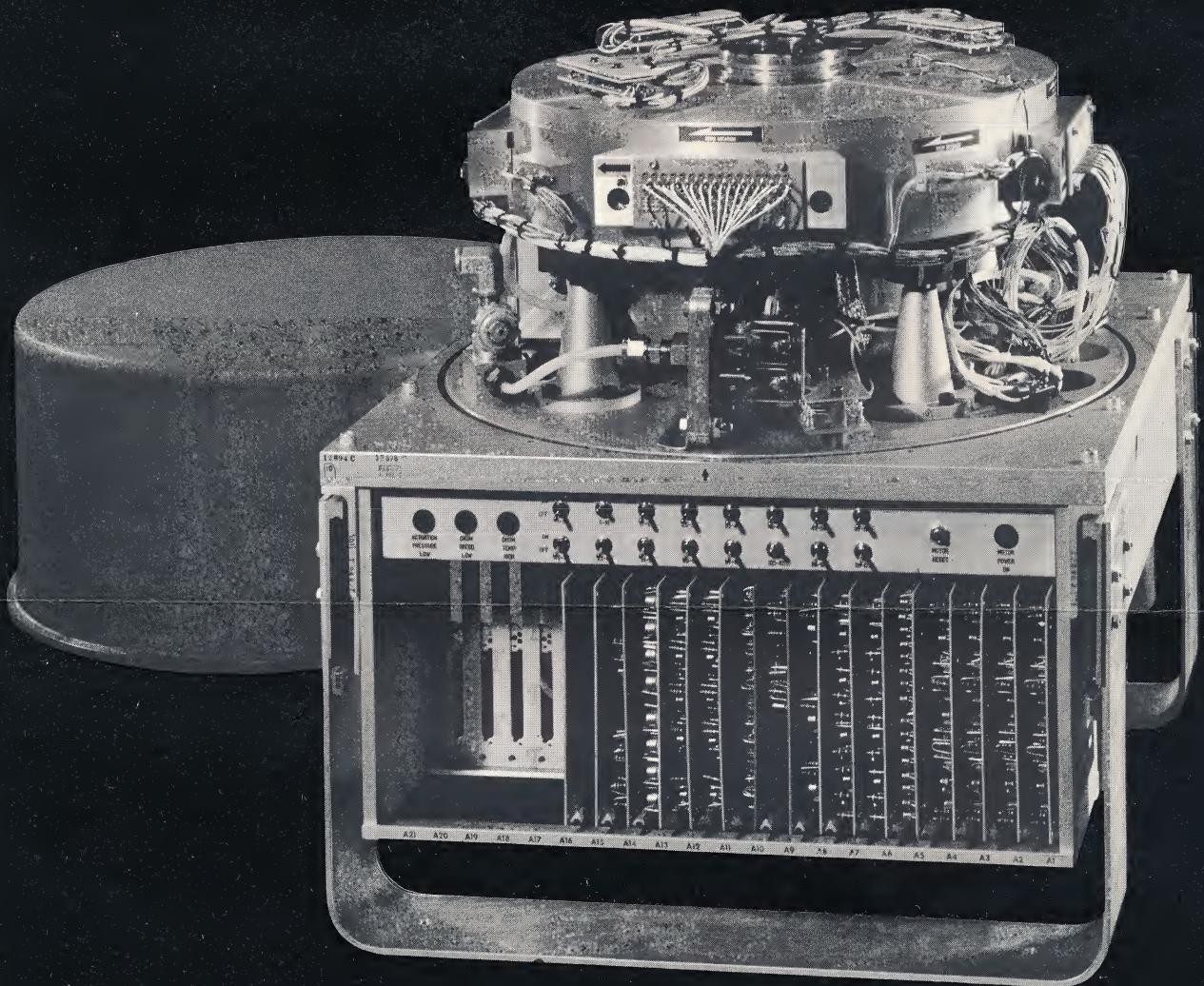




DISC/DRUM Memory Systems

series **7300**

Digital Development Corporation



Specifications

Speed	3,600 rpm
Average Access Time	8.5 msec.
Bits/Track	20,000 nom.
Bit Transfer Rate	1.2 mc
Tracks/Disc	128 (64/surface)
Rated Bits/Disc	2.56×10^6
Timing Tracks	16 available
Recording Method	Phase modulation
System Design Life	10 years
Motor Power	115 ac 1Ø 60 cps
Ambient Operating Temperature	0° to 125° F
Ambient Operating Humidity	5% to 95%
Standard Power Supply Voltages	+ 18, - 12
Standard Logic Levels	0v and +6.8v

DESCRIPTION

Series 7300 Memory Systems are a standard line of modular, high-capacity memory packages designed for mass storage of data in a variety of random-access computer applications. These units provide a completely self-contained, rapid-access memory subsystem for use by system builder, computer manufacturer and data processing user. Each 7300 includes all-silicon electronic circuitry for reading, writing, track selection and generation of timing signals. All input and output signals interface with the computer system at logic levels.

The basic 7300 is designed for installation in a standard 19-inch cabinet — either in customer equipment or in larger systems provided by DDC which include memory device controller logic. Standard coupler systems are available for many types of computers and DDC is equipped for computer-automated design of controller logic for special-purpose applications using standard circuit modules.

DISC/DRUM DESIGN

The disc/drum memory unit is a rotating magnetic device that combines the high storage capacity of magnetic discs with the speed and reliability of magnetic drums. The volumetric efficiency of discs offers maximum data density in a package just one-quarter the size and weight of standard drums.

The Series 7300 has a drum rotor with up to four individual magnetic discs attached. The discs are precisely mounted on the drum in the form of rings and each disc surface is accurately located with respect to the recording heads which are mounted on the external drum housing. The discs are coated with a nickel-cobalt magnetic plating of controlled thickness and uniformity for best recording characteristics. The unit is driven by an integral motor which uses high-quality, lifetime-lubricated ball bearings.

MODULAR MEMORY

The modular system of multiple discs and heads allows the capacity of the 7300 to be tailored to individual requirements. By specifying the number of discs and heads for your application, you buy only the initial capacity and expansion capability that you need. Additional heads are easily added in the field. Capacity may be expanded by multiple units with up to eight memory devices per controller.

HEAD-PER-TRACK ORGANIZATION

The fixed head-per-track design of the Series 7300 provides the fastest possible access to data. Each disc has 64 data tracks per surface, or 128 tracks per disc. With four discs, up to 512 data

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MODEL	7301		7302	
Discs	1	2	3	4
Tracks	128	256	384	512
Rated Capacity (millions of bits)	2.56	5.12	7.68	10.24
Over-all Height (in.)	17.5	17.5	19	19
Max. Weight (lb.)	140		160	
Max. Power Requirements (watts)	55		100	

tracks are possible in a single unit. Recording heads are organized in groups of 64, and each group services one disc surface. Flying heads are of the hydrodynamic, gas-lubricated-bearing type. Optimized head performance and efficiency are achieved by computer-automated, gas-bearing design. In recording position, the heads fly at a nominal spacing of 100 micro-inches from the plated magnetic surface. The heads never touch the recording surface. They rest in normal position away from the surface until the unit reaches operational speed. Then the heads are actuated and brought into position. All head tolerances are precisely held in the production process. Thus, no adjustments are required which saves time and eliminates the possibility of damage or malfunction.

RELIABILITY

The disc/drum unit is shock-mounted within a hermetically sealed enclosure which is filled with dry, inert gas. This controlled environment completely protects the unit from dust, dirt, moisture or any other contaminating elements. Also, the magnetic recording surface is a hard metal plating which, unlike softer magnetic oxide coatings, does not emit loose particles. Consequently, no dirt is generated within the sealed cover.

APPLICATIONS

The 7300 systems are available for a variety of data organizations and interfaces. Simple single-track selection or parallel-track selection systems can be provided for faster data speeds. Within limits, formatting for bit, word or block addressing is quite flexible. Many systems have been supplied with multiple-bank storage features for simultaneous multiple-channel access and simultaneous reading while writing. Standard options include parity generation and checking, memory protection or "write-lockout" switches, special logic levels, serial registers, and special timing tracks.

More than 400 DDC memory systems are now in field service. Most of these are in on-line process control applications. DDC provides complete technical design and applications assistance to meet your requirement at no extra cost. For detailed information, contact: Manager, Technical Marketing.



Digital Development Corporation

5575 Kearny Villa Road, San Diego, California 92123 • Tel. (714) 278-9920

Here's the information you requested...

...from DDC. We hope you find it useful and informative. Please feel free to write or phone for additional engineering or sales data. If you have an urgent problem and would like to talk directly to our senior systems engineer, Jack McLaughlin, please call collect: (714) 278-9920.

If you would like to be placed on our mailing list and receive descriptive literature concerning new products, please check your name for spelling and address and return the post-paid reply card to us.

Cordially,
TOM PINE
Marketing Director

Please add my name to your mailing list and send complete information on:

DDC Memory System_____ Capacity_____

Bit Transfer Rate_____ Logic Levels_____

Environmental Req'ts._____

Other Information Requested_____

My application is for: ☐ INDUSTRIAL CONTROL ☐ GENERAL PURPOSE COMPUTER ☐ OTHER

My request for information concerns:

☐ A Current Application ☐ Possible Future Application ☐ Competitive Comparison

Other_____

☐ Please have your representative call.

PUB.	DPX	ISSUE	4/66	REP.	MODEL	MAILED
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6/23

Mr. T. Nelson
Systems Consultant
Box 1546

Poughkeepsie, N.Y. 12603

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San Diego, California 92123

Digital Development Corporation . . .

. . . designs and manufactures a broad range of disc/drum memory systems. Over 400 DDC memory systems are now being used in computer manufacturing, on-line process control, and other related applications throughout the world.

Most recent development is the 7300 disc/drum memory series, introduced primarily to meet the new generation of mass storage needs typified by advanced time-sharing computers and on-line industrial control systems. High reliability, speed and economy are the principal advantages of the 7300 bulk storage memories.

Complete interface logic and systems engineering services are also provided with DDC memory devices.

Founded in 1959, DDC is now headquartered together with its production facility in a modern 30,000 sq. ft. plant in San Diego. Further information will be provided upon request.

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